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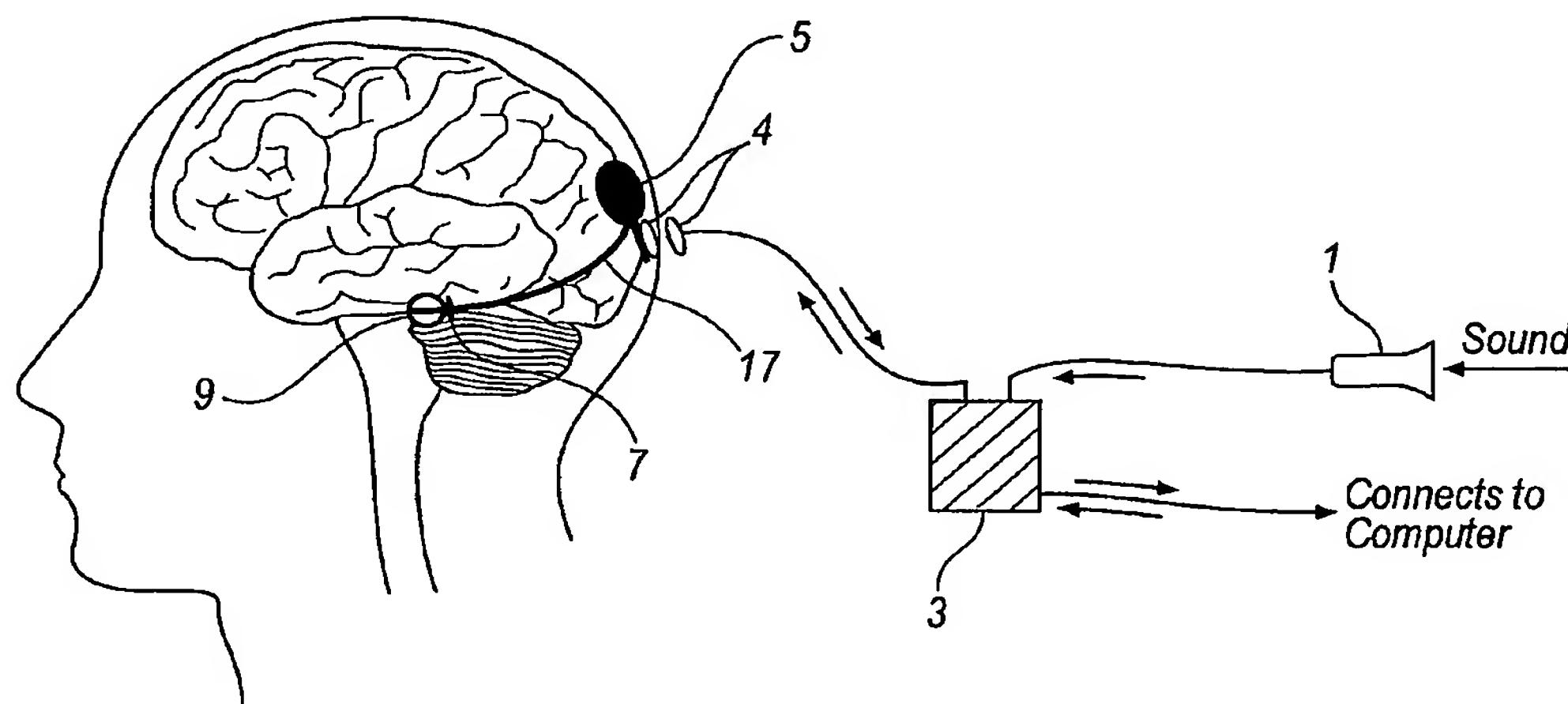
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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR INDUCING INTELLIGIBLE HEARING



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(57) Abstract: The present invention comprises systems and methods for inducing auditory sensations in patients by stimulating the inferior colliculus of the mammalian midbrain. In some embodiments, the invention comprises an auditory prosthesis system comprising a microphone, a sound processor, a current stimulator, and one or more stimulating electrodes disposed in the inferior colliculus of a mammal. At least one of the stimulating electrodes may be comprised of one or more shanks, each shank comprised of one or more stimulation sites. In some embodiments, without limitation, the invention comprises methods of inducing auditory sensation in a mammal, comprising the steps of providing a microphone, a sound processor, and a current stimulator; providing one or more stimulating electrodes each comprised of two or more shanks, each shank comprised of one or more stimulation sites; disposing at least one stimulating electrode in the inferior colliculus of a mammal; and stimulating at least one isofrequency lamina of the inferior colliculus by applying an electrical signal through at least one of the stimulation sites.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

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